Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Pond A

Facility Location & Jurisdiction: Cathedral Pines

User Input: Watershed Characteristics

Extended Detention Basin (EDB)	EDB				
Watershed Area =	5.50	acres			
Watershed Length =	795	ft			
Watershed Length to Centroid =	350	ft			
Watershed Slope =	0.040	ft/ft			
Watershed Imperviousness =	21.5%	percent			
Percentage Hydrologic Soil Group A =	0.0%	percent			
Percentage Hydrologic Soil Group B =	100.0%	percent			
Percentage Hydrologic Soil Groups C/D =	0.0%	percent			
Target WQCV Drain Time =	40.0	hours			
Location for 1-hr Rainfall Depths (use dropdown):					
User Input	•				

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	10	0.00	0.00
0.92	537	0.92	0.01
1.92	1,979	1.92	0.02
2.92	3,000	2.92	0.03
3.92	4,130	3.92	4.89
4.92	5,368	4.92	5.48
5.92	6,715	5.92	6.05
6.92	8,247	6.92	46.80
7.42	8,984	7.42	89.31

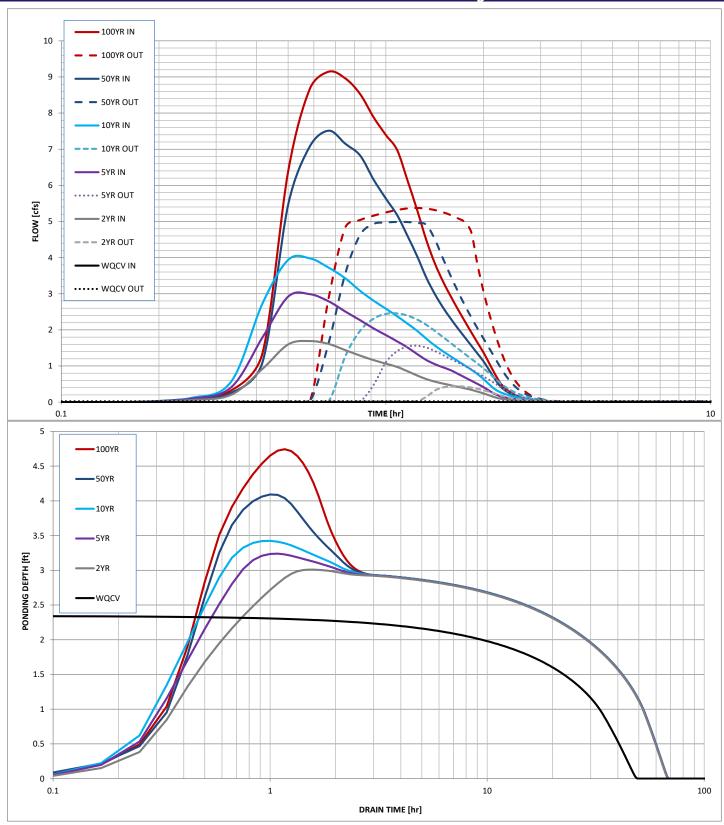
After completing and printing this worksheet to a pdf, go to: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif Create a new stormwater facility, and attach the PDF of this worksheet to that record.

Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.056	0.126	0.224	0.317	0.575	0.725	acre-ft
Inflow Hydrograph Volume =	N/A	0.126	0.224	0.317	0.575	0.725	acre-ft
Time to Drain 97% of Inflow Volume =	40.8	56.1	52.3	49.6	42.8	39.5	hours
Time to Drain 99% of Inflow Volume =	44.0	60.9	58.8	57.3	53.7	51.9	hours
Maximum Ponding Depth =	2.35	3.01	3.24	3.42	4.09	4.74	ft
Maximum Ponded Area =	0.06	0.07	0.08	0.08	0.10	0.12	acres
Maximum Volume Stored =	0.056	0.098	0.114	0.129	0.190	0.261	acre-ft

Unresolved from Submittal 1: These highlighted row do not match the MHFD spreadsheet results





Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Pond B

Facility Location & Jurisdiction: Cathedral Pines

User Input: Watershed Characteristics

EDB					
4.00	acres				
955	ft				
450	ft				
0.045	ft/ft				
= 27.0%	percent				
0.0%	percent				
= 100.0%	percent				
Percentage Hydrologic Soil Groups C/D = 0.0%					
Target WQCV Drain Time = 40.0					
Location for 1-hr Rainfall Depths (use dropdow					
User Input					
	= 4.00 = 955 = 450 = 0.045 = 27.0% = 0.0% = 100.0% = 0.0% = 40.0				

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	10	0.00	0.00
0.92	396	0.92	0.01
1.92	2,414	1.92	0.02
2.92	3,918	2.92	0.03
3.92	5,342	3.92	4.49
4.42	6,150	4.42	4.75
4.92	6,882	4.92	17.30
5.92	8,899	5.92	87.03

After completing and printing this worksheet to a pdf, go to: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif Create a new stormwater facility, and attach the PDF of this worksheet to that record.

Routed Hydrograph Results

= WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
= N/A	1.19	1.50	1.75	2.25	2.52	in
= 0.047	0.112	0.187	0.257	0.446	0.554	acre-ft
= N/A	0.112	0.187	0.257	0.446	0.554	acre-ft
35.5	63.0	62.1	60.0	55.0	52.4	hours
= (38.1)	66.9	67.2	66.1	63.6	62.3	hours
= 2.11	2.88	3.09	3.22	3.61	3.83	ft
= 0.06	0.09	0.10	0.10	0.11	0.12	acres
= 0.048	0.105	0.124	0.138	0.178	0.204	acre-ft
	= N/A = 0.047 = N/A = 35.5 = 38.1 = 2.11 = 0.06	= N/A 1.19 = 0.047 0.112 = N/A 0.112 = N/A 0.112 = 35.5 63.0 = 38.1 66.9 = 2.11 2.88 = 0.06 0.09	= N/A 1.19 1.50 = 0.047 0.112 0.187 = N/A 0.112 0.187 = 35.5 63.0 62.1 = 38.1 66.9 67.2 = 2.11 2.88 3.09 = 0.06 0.09 0.10	= N/A 1.19 1.50 1.75 = 0.047 0.112 0.187 0.257 = N/A 0.112 0.187 0.257 = 35.5 63.0 62.1 60.0 = 38.1 66.9 67.2 66.1 = 2.11 2.88 3.09 3.22 = 0.06 0.09 0.10 0.10	= N/A 1.19 1.50 1.75 2.25 = 0.047 0.112 0.187 0.257 0.446 = N/A 0.112 0.187 0.257 0.446 = 35.5 63.0 62.1 60.0 55.0 = 38.1 66.9 67.2 66.1 63.6 = 2.11 2.88 3.09 3.22 3.61 = 0.06 0.09 0.10 0.10 0.11	= N/A 1.19 1.50 1.75 2.25 2.52 = 0.047 0.112 0.187 0.257 0.446 0.554 = N/A 0.112 0.187 0.257 0.446 0.554 = N/A 0.112 0.187 0.257 0.446 0.554 = 35.5 63.0 62.1 60.0 55.0 52.4 = 38.1 66.9 67.2 66.1 63.6 62.3 = 2.11 2.88 3.09 3.22 3.61 3.83 = 0.06 0.09 0.10 0.10 0.11 0.12

Unresolved from Submittal 1: These highlighted row do not match the MHFD spreadsheet results



